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TRANSLATIONS.

The Therapeutic Employment of the Fumes of Opium.

Doctor Armand, a military medical officer read, recently, to the Academy of Medicine, Paris, a paper under this title, expressing the belief that, medically speaking, the fumes of opium might be very useful. He refers to the declaration of Sydenham, that he would rather renounce the practice of medicine than the employment of opium. Not doubting that the illustrious English physician would have utilized the fumes of opium in the Chinese method had he been acquainted with it, the author continues: Indeed! after several years of experimentation, during which we employed the fumes of opium as a medical agent, we will not defer longer the publication of this very simple, inoffensive and very fruitful means to be directed against a series of chronic and neuralgic affections, especially of the chest.

But first, how should opium be smoked? With a special pipe, of which we give a description.

The stem of an opium pipe resembles a flute, having for its only lateral opening that of the mouth-piece. It is therefore a tube closed at one end, near which there is pierced, laterally, a circular opening, to which is adapted the neck of a pipe. This pipe has no resemblance to a tobacco pipe. It is formed of a sprinkling nozzle, having only a very small hole of scarcely a millimetre (.039 in.) in diameter in the middle of its slightly convex surface.

The pipe of baked clay of six or seven centimetres (2.24 to 2.73 in.) in diameter and four in depth, is hollow interiorly, and terminates in a neck of one centimetre (.39 in.) in diameter. These dimensions of the pipe, as well as those of the large tube, of at least fifty centimetres (19.4 in.) in length are determined in order to cool the smoke.

In order to charge the pipe, one or two grains of extract of opium should be taken upon the point of a steel needle.

This piece of the extract is to be applied to the flame of a lamp, in order to put it in a state of ebullition, and to give to it a sufficient degree of consistence to permit it to remain in a state of inflation.

This piece of prepared opium is then placed, very carefully, near the little central hole of the pipe, but without obstructing it, which is effected by means of the point of the needle, which is always held in the hand. This done, the central portion of the pipe is exposed to the flame of a lamp or candle. The opium assumes the state of ebullition, ignites, and this is the moment for the aspiration of the smoke, by a deep pulmonary inspiration.

The pipe is then withdrawn from the flame, the smoke retained for an instant in the bronchi, and thence returned by an expiration more or less prolonged, either through the mouth or through the nostrils. The point of the needle is then freshly inserted in order to maintain the opening of the central hole; the pipe replaced in the flame, and a new aspiration made. If in boiling, the opium which remains flows away from the centre, which happens if it is not sufficiently ignited, the point of the needle serves to replace it

before it has cooled. After the fourth or fifth aspiration all the opium will have been burned. The charred residuum may be removed with the needle, using it as a scraper, and it must be renewed if it is desired to continue the aspirations or rather the inspirations.

Indeed, a simple aspiration with the mouth (buccale), as with the tobacco pipe, would not suffice to burn the opium; it would scarcely suffice to introduce a little smoke into the mouth, which would avail nothing. The true method of habitual smokers, is to make not simply a buccal but a pulmonary aspiration; in a word a strong inspiration as prolonged as possible, filling the bronchi with air loaded with the fumes of opium. The smoke must then be inspired to the full capacity of the lungs, and this is the indispensable condition not only to burn the opium but to receive its effect.

It is necessary to observe carefully that the opium must not be ignited by the flame of a smoky lamp. Moreover, our oil lamps are worthless for this purpose, on account of the grease with which they contaminate the opium and load its fumes. The alcohol lamp irritates the throat and the bronchi; carburetted hydrogen gas as well as petroleum are mephitic.

At Singhapour the virgin oil of cocoa is used in the lamps for burning opium. By analogy we have tried the oil of almonds, but even, this was too smoky, and we now prefer the flame of a wax candle simply.

Among other physiological and therapeutical effects of the fumes of opium, we will mention the following: a person in good health who smokes opium for the first time, finds the smoke agreeable and pleasant to the taste and smell. From the first pipe he is a smoker; and except while making a very violent inspiration, the smoke of opium never occasions cough. This fact is very important in a therapeutic point of view.

Now, how many grains of opium can an adult smoker burn without being perceptibly affected? At the beginning

of our personal experiments we investigated this point of the question frequently, and can affirm that before having burned fifty centigrammes (about 10 grs.) of opium, we were never affected sensibly. Beyond that quantity there was general heat, and during sleep there were dreams anything but agreeable, and approaching to nightmare.

Have we, therefore, become an opium smoker? Assuredly not; the smoke of opium, though agreeable, had not for us irresistible attractions. The idea of smoking opium does not recur to us perhaps three times in a year.

There is no danger of being drawn beyond the limits of prudence and necessity in smoking opium. Without meaning to dispute that excess is always injurious, we assert that the effect of smoking opium upon the great smokers of Indo-China has been greatly exaggerated.

By keeping within prudent limits, that is to say, smoking from one to ten grains of opium during twenty-four hours, there is obtained a very salutary sedative, and beneficial medical effect in the following cases:

In the first rank we cite cases of chronic bronchitis and laryngitis, not excepting the acute forms of these affections; pertussis in patients capable of smoking the opium pipe; cases of asthma, of anguina pectoris, and of nervous palpitations, of gastralia and of enteralgia.

In the second place, neuralgia, facial, dental, sub-orbital and hemicranial; muscular and articular rheumatism; for it should be observed especially that beside the sedative action of the smoke of opium, there is likewise, from large doses the general calorification and sudation or diaphoresis, which the practitioner may excite and employ according to the clinical indications. We will conclude by replying, in advance, to an objection or rather an observation which we anticipate:

It will be asked, why not substitute for the opium pipe, opiated cigarettes? At one time we were thus deluded. We sought and discovered a substance burning readily and readily impregnated with the watery solution of the extract

of opium, and capable of being made into opiated cigarettes composed as follows:

Take; pulverized flower of the linden in sufficient quantity to make twenty cigarettes—

Impregnate these flowers with an aqueous solution of one gramme of extract of opium; let them dry in the air, moderately, and make of them twenty cigarettes, containing one grain (five centigrammes) of extract of opium. When dried sufficiently let them be smoked in the usual manner.

The result has not answered our expectations; although mild the smoke of the opiated linden flowers, especially when mingled with that of the paper, which is always acrid and irritating, does not permit pulmonary aspirations to be made.

It becomes necessary to restrict the aspirations to the mouth, and it is with difficulty that the taste of the opium can be perceived in the smoke, which, in fact, is largely, if not totally evaporated before reaching the mouth.

What has been said of opium cigarettes may be said of all medicated cigarettes, and it is our conviction that every medicinal substance used by inhaling its smoke, should be burned in the state of extract, as the extract of opium, in an opium pipe, whose name we will some day change for that of *pipe for smoking medicinal extracts.*

Reflex Actions Determined by Constant and Continuous Electric Currents.

BY DR. ONIMUS.

The author considers the reflex contractions which are produced in muscles remote from those which receive the divisions of the electrified nerve.

In the cases in which the motor and the sensitive nerves are intact, it is observed that the descending or centrifugal current produces reflex contractions at the close, and the

ascending or centripetal produces reflex contractions at the opening.

In the cases in which the sensitive nerves are paralyzed (by section of the posterior roots) it is observed that the ascending current produces nothing. In the cases in which the motor nerves are paralyzed (by the administration of curare, after ligature of the artery of the limb which is to be protected from the action of the poison) the same results are obtained as when the nerves are intact.

One question remains which the author proposes to solve, viz.: Is the action of the current as a cause of reflex action continuous, or does it act upon the separated parts only at the moment when the contractions appear?

ORIGINAL COMMUNICATIONS.

Case.—Amputation at the Shoulder-joint.—Recovery.

BY HIRAM WANZER, M. D., CHICAGO, ILLS.

I was called, Dec. 8th ult. to Mr. C. Jerman, aged 51. He was rather spare, small in stature, with constitution not vigorous. He had suffered from the age of 16, with discharging ulcers upon one leg and foot, which had healed two years since. He was one of the employés of Messrs. Moody & Church. While engaged at a surfacing planer, which has a cylinder with three cutting knives, performing some 3,500 revolutions per minute, the fingers of the right hand were caught in the machinery, and its deadly work was not finished until the hand, forearm, and arm, were drawn in and severed by piecemeal, as far as the upper fourth of the humerus. Further advance and destruction were prevented by the contact of the chest and shoulder against the planer.

The patient was taken to a druggist, who administered morphia and diffusible stimulants. There was now sufficient pulse and vitality to justify operative procedure, but the surroundings being unfitted, he was taken to his residence, one and a half miles. The length of time, and the degree of suffering, during his transit home, were succeeded by shock, and such extreme prostration of the vital powers, that operative measures were thought contra-indicated.

Drs. H. T. and E. W. Lee, were called in consultation. I improved the moments, before their arrival, in the administration of strong coffee, and diffusible stimulants, which had but little effect, either in increasing the heart's action, or in arousing the vital energies. I thought it judicious to follow the opinions of some of our most eminent surgical authorities, in waiting for warmth of the surface, color, pulse at the wrist, consciousness, and a greater degree of reaction, especially before proceeding with such a formidable operation. It was the opinion of the counsel, that no further reaction could be obtained—that operative measures were only indicated. Drs. Lee administered chloroform to anesthesia. During its early inhalation the almost imperceptible, fluttering pulse, became increased in tone and volume. There had been very little hæmorrhage in consequence of the torsion of the vessels. The brachial artery was pulsating at the bottom of the wound; the torn terminal branches of the brachial plexus were lying by its side. The question arose, whether to disarticulate the head and remaing shaft of the humerus by incision, or separate the soft parts from their circumference. I chose the latter to avoid opening the cavity of the joint, and prevent so large a suppurating surface. After ligating the brachial artery, the soft parts were carefully detached from the bone by the fingers and scalpel. There were difficulties encountered in reaching and perforating the capsular ligament in consequence of its distance and density. At this juncture we were suddenly stopped. The pulse forsook the wrist, respiration momentarily suspended; showing the well marked

toxic action of the chloroform upon the blood, nerve centers and respiratory organs; free admission of atmospheric air, cold jets of water were thrown upon the surface, with recumbency. The patient soon gasped; the pulse was again perceptible at the wrist; respiration re-established, the operation was resumed and finished. Considering the lesion to the blood vessels, caused by the accident and operation, the hæmorrhage was insignificant, the brachial artery only required ligation. The flaps handsomely formed by the machinery, were coapted by several interrupted sutures, &c. Heat and derivatives were now applied to the cold surface and extremities. He speedily reacted from the shock of the injury and operation, when a cordial stimulant was given.

9th. 8 A. M. Visited patient with Dr. E. W. Lee, found the pulse 120 per minute, with surprising strength and volume; there was general warmth and moisture upon the surface. He had enjoyed some refreshing sleep. The following day there was an erysipelatous glow, with heat and tenderness in the axilla, which soon disappeared, by cold lotions and 20 gtt. every 3 hours, of Tinct. Ferri Muriatis, alternated with Rhine wine, his accustomed beverage, which were all the internal medicines given throughout the treatment. His appetite daily increased; the secretions normal. A small portion of the wound united by the first intention, with very little suppuration. I ascribe his speedy recovery much to his former uniform habits, the plasticity of the blood, and to our entire withholding of all narcotic remedies.

Remarks.—As stated, morphia was given by the apothecary. That would once have been my procedure, until surgical experiences taught me that narcotics, under the circumstances, not only allay *pain*, but they obtund nerve sensibility; they often paralyze the brain and heart; frequently they conduct our patient into a quiet sleep, which knows no waking. So seductive, *then*, is their action, it matters not how minute the dose, it is difficult to determine whether our patient is suffering from the pre-existing shock,

or from the action of the medicine, so contra-indicated, as I believe them to be, for *pain*, after traumatic injuries. I have abandoned them for medicines that exalt the vital actions. *Pain* then becomes a therapeutic agent, a priceless stimulant to our patient, an excitor to organic action in the struggling reaction. Pain is a conflict for the mastery, that he often feels long after the pulse has left the wrist, and frequently abiding until the spirit takes its flight. I find, in searching the records of some of our surgical authorities, there are conflicting opinions about operating before reaction is established. I am confident my surgical career would have been brighter and more successful, had I used less opium and its alkaloids, and had I frequently acted with a greater degree of promptness, as in the case reported. In waiting too long for reaction, it often never came. In being too conservative, trying to save a worthless member, the patient has often sunk from pyemia, and the exhausting suppuration; or he has often passed, before this process was established, into traumatic delirium, tetanoid symptoms and death.

172 West Twelfth Street.

Cook County Hospital, Chicago, Ill.

Rupture of Urethra—Cystotomy—Cured—Service of Dr. Edwin Powell—B. C. Miller, House Surgeon.—Frank G., aged 60, native of Ireland, by occupation a grocer, admitted into the hospital October 9th, 1868. Habits irregular; previous health good. States that four weeks since he contracted gonorrhœa, five days after this was unable to micturate; he applied to a physician for relief and was catheterized with great difficulty. After this was unable to pass a drop of water, an instrument could not be passed. After suffering the most intense agony for some time he was suddenly relieved, and on examination his scrotum was terribly swollen. Four days after this, two

large incisions were made into each side of the scrotum, liberating a large amount of water, pus and gangrenous shreds of tissue. When admitted to the hospital he was very much emaciated and depressed in body and mind. The scrotum presented a swollen, gangrenous appearance, and an odor so offensive that it was almost impossible for any one in the ward to lie in close proximity to him; on examination, found that the urine passed through the scrotum, none escaping through the urethra in front. In the perineum, extending as far back as the junction of the deep and superficial layer of the deep perineal fascia was a large fluctuating mass.

Oct. 12.—Patient restless during the night, cannot sleep, appetite poor, large sloughs came away, leaving the right testicle exposed. At least one-half of his scrotum gone.

Oct. 13.—Was placed under the influence of chloroform, and cystotomy preformed. (The operation was essentially the same as Dupuytren's lateral operation for stone.) On making the first incision through skin and superficial fascia a quantity of pus, urine and gangrenous cellular tissue was met by the operator. Not much hæmorrhage accompanied the operation. Patient reacted kindly although quite weak. He was given a full dose of morphine, and an ounce of brandy. Three hours after operation was quite comfortable.

Oct. 14.—Patient feeling quite comfortable; urine all passing through the incision. Removed another large slough from the scrotum, leaving both testicles exposed.

Oct. 16.—The sloughs all came away to-day, leaving a surface studded with healthy granulations, and the patient minus, at least calculation, two-thirds of his scrotum. Water all comes away through the incision. The patient able to hold the water for a time and pass it at will.

Oct. 19.—Is comfortable. Has complete control over the evacuation of bladder. Scrotum granulating finely.

Oct. 30.—Doing well. Good appetite and sleeps well.

Nov. 1.—Still improving. A No. five catheter passed

into the bladder and allowed to remain, the water passing through it.

Nov. 5.—Removed the No. five catheter and introduced a a No. *ten*, and allowed it to remain. The wound caused by the operation granulating, is almost healed.

Nov. 9.—Wound completely healed. Scrotum doing well.

Nov. 26– Is gaining flesh rapidly. Scrotum healed to a small point, that communicating with the urethra.

Dec. 7.—Scrotum completely healed; catheter removed. All the water passing "*per vias naturales.*" The patient has been for years, the victim of a varicocele which caused him great inconvenience; on the scrotum healing and the patient regaining his feet, the varicocele was found to have disappeared. Whether the veins sloughed away with the scrotum, or whether the contraction caused by cicatrization of the organ cured them, I am unable to say.

Dec. 26.—Since admission to the hospital the patient has gained twenty-one and a quarter pounds. To-day he is discharged, cured.

Super-Oxygenation as a Therapeutic Measure, with Notes of Cases Treated.

BY S. S. WALLIHAN, M. D., CHICAGO.

[Concluded.]

All the metallic per-oxides give off oxygen, when heated to redness; and no doubt, eventually, the disengagement of the gas will involve only the expenditure of a certain amount of heat.

In emergencies, and when a prolonged use of the remedy is not required, any of the foregoing, or equally unobjectionable methods may be used. When exhibited in chronic cases, involving protracted use of the remedy, and in some cases of unusually sensitive lungs, or of repugnance to the slightest disagreeable taste or smell, only those processes

which afford the gas in a state of the utmost purity are admissible.

The apparatus for the use of condensed gas in iron bottles, invented by Barth, of London, although very convenient for such practitioners as find it out of the question to manufacture their own gas, and possessing some decided advantages for all, has never come in much request.

Galante, of Paris, has perfected a very convenient apparatus for the manufacture of pure oxygen, but its expensiveness, including delay and cost of importation will preclude its use in this country. Dr. Beigel has patented a form of apparatus and inhaler, which is both competent and convenient. Sprague, of Boston, has brought an apparatus which possesses some merit, in having attached a polished, patented, automatic heat-regulator; but I do not consider its advantages sufficient to warant the somewhat extravagant price asked for it.

I am satisfied, however, that *the short-comings of impure and carelessly manufactured gas have done more than all else to bring the treatment into discredit, and prevent its use by the profession at large.*

1. *Protoxide of nitrogen*, the real value of which, as a therapeutic, has been overshadowed by its brilliant properties as an anæsthetic. More than twenty years ago, Dr. Zeigler, of Philadelphia, experimenting with it, for dental purposes, also administered it, tentatively, in moderate doses, for chronic general torpor of the system, nervous and other functional disorders, with very encouraging results. In his work on this gas, now some years out of print, he dwells on its physiological action, when exhibited to proper subjects in suitably regulated doses, is very positive in his conclusions as to its therapeutic value, and urges the medical profession to recognize and further develop its claims as a remedial agent. His deductions were, of course, entirely empirical, at least he made no attempt to elucidate the *rationale* of its action.

Dr. Barker, a more recent authority on the same subject, quotes Dr. Zeigler, as above, and coincides with him.

Dr. MacCormack thought that, properly diluted, it would be found valuable in the treatment of some forms of disease; but he seems not to have used it to any extent, and predicated his opinion wholly on the proportion of oxygen contained in the compound.

Garrod, and other recent authors on Materia Medica, do not mention it.

Dr. Hartshore, of Philadelphia, in his *Essentials of Practical Medicine*, (Phila., 1868,) advises a trial of it in bad cases of asthma, evidently with a view solely to its anæsthetic effects. Dr. Birch doubts if it be in any sense a super-oxygenating agent. Other authorities on the medical uses of oxygen, make no mention of this compound.

"Oxygenized Air," of late so over-lauded in advertisements, is nothing more or less than a certain admixture of protoxide of nitrogen with free oxygen and common air. In fact, in most instances, as administered by several pseudo-prophets each of whom claims to be a "discoverer," and has been selling "rights" to use the treatment, it is composed of protoxide only, given in moderate doses.

Used alone, aside from its anæsthetic properties when exhibited in larger doses, I do not attach so much importance to this agent as some others have done; but as a modifier of pure oxygen I consider it invaluable. In some spasmodic affections I have found its use a valuable substitute for chloroform and the ethers. It often succeeds when these utterly fail, and it is never followed by the disagreeable and some times serious symptoms attending their exhibition. It is excellent in neutralizing affections, and in certain forms of "nervous headaches" it has proved almost a specific. I have invariably succeeded in overcoming the wakefulness of nervously debilitated women by the administration of moderate doses at bedtime.

Its greatest value, however, as it appears to me, lies in in its use as a diluent and vehicle for pure oxygen. Without

venturing upon any discussion of its chemical or physiological action on the human organism, reference to a few known facts concerning it will be in place:

First, it is the most soluble of all gases, water at ordinary temperatures, absorbing its own volume of the gas.

Second, it supports combustion almost as perfectly as oxygen itself.

Third, the exhilarating properties popularly ascribed to it have been very much over-stated, a majority of those inhaling the pure gas experiencing nothing of the kind.

Fourth, its effects on the nervous system are peculiar, and may be made so slight as to be inappreciable, or so powerful as to produce momentary insensibility, with any desired degree of approximation to either extreme.

Fifth, inasmuch as it is largely absorbed by the system, when taken into the lungs, and produces many of the same effects as follow the use of oxygen itself, which it also very much resembles in its action on metalic and other oxidizable substances, it may be safely assumed that it is, of itself, a powerful super-oxygenating agent.

But, setting aside its claims as a therapeutic *per se*, I have become fully satisfied that, used as a modifier of oxygen gas, it plays no unimportant part *as an adjuvant*, while at the same time *increasing the solubility of the basic element.*

In this connection I desire to call attention to a point which seems to have escaped the attention of every author who has written on the use of oxygen.

It is well known that alcohol is the basis of all, so called, "spirituous" beverages; but no physician, desiring to exhibit a stimulant, prescribes raw alcohol, or alcohol and water. Choice brands of old wines, brandies, whiskys, etc., although utterly worthless without it, are not valued according to the percentage of spirits they contain; and *the action of oxygen, properly "toned down" and modified is as different from its action in an unmixed and undiluted state as is the action of absolute alcohol from that of the best French brandy, or good grape wine.* From my repeated tests of the gas, in

every form of administration, and in a great variety of cases, I am forced to to the conclusion that, except in certain comparatively rare contingencies, and then, as necessarily, only for temporary purposes, *unmodified oxygen gas is unfit for general therapeutic use as is unmodified and undiluted alcohol for use as a beverage.* Nor do I consider its dilution with common air, as practiced by Goolden, Birch and others, better, in comparison, than alcohol for medicinal use, diluted with simple water.

Not to discuss this point further, I am persuaded that another source of some reputed "failures" of the oxygen treatment, has been from the neglect of experimenter to properly modify the powerful agent (for good or evil) they have tampered with.

3. *Oxgenated water*, probably the best vehicle for the introduction of oxygen into the system by means of the stomach, is prepared by converting water into steam, thus expelling all its atmospheric air, after which pure oxygen gas is brought in contact with the steam, under high pressure, and takes the place of the expelled air. The water thus becomes a saturated solution of the gas, and is the only oxygenated water worthy of name. At present it can be procured only in England, where it is prepared with considerable care by the Messrs. Robbins & Co., and by Barth, of London. Dr. Barth was first to call attention to it, and has patented an apparatus for its manufacture. It is to be hoped some enterprising manufacturing chemist, in this country, will undertake its careful and thorough preparation. Whenever direct absorption into the gastric and portal circulation is the object in view, this is a most eligible form for the exhibition of the remedy. To what extent it may possess antidotal and antiseptic properties, in some forms of zymotic diseases, *e. g.*, diphtheritis, cholera, scarlatina, etc., remains to be demonstrated. I anticipate important results in this direction. The advantages of ready preparation and portability render it especially valuable in the absence of, or in conjunction with other methods of administration.

4. *Nitrous-oxide water*, properly prepared, will, in time, become more popular than now.

While considering it far inferior to *oxygenated water*, Dr. Birch admits that "in some nervously depressed and hypochondrical patients" he would give it the preference. It was originally put forth as a patented nostrum, and had quite a sale; but it may be questioned whether some of its properties are not measurably due to the trace of nitrous acid generally present.

5. *Oxygenated bread* is being manufactured and used, to some extent, in England, and is highly extolled by several practitioners of some repute. Dr. Birch, in particular, is quite sanguine respecting its claims, predicting that it will prove a boon in medical practice. It is prepared on the same principle as oxygenated water, *i. e.*, by substituting pure oxygen gas for common air and carbonic acid, in aërating the dough. Processes have been perfected in its manufacture by which it is made to retain its own sweetness and preserve the perfect occlusion of the oxygen for several weeks.

"A surprisingly small bit of this bread proves its special value *in suitable cases*. * * * Its relative effect on the appetite is singular. Thus, on the one hand (as might be expected) it stimulates the appetite when absent or capricious, while, on the other hand, it tends to produce such a feeling of epigastric fullness, when sufficient food has been taken, as to effectually suspend (if not satisfy) some morbidly craving appetites. * * * *In some cases* it will be found advantageously to supersede artificial, pepsine, pancreatine, and even quinine and the mineral acids. * * * It is particularly indicated in cases of delicate children with continually recurring ascarides, functional derangements of stomach and bowels, and mesenteric weakness." (Birch op. cit., pp. 18, *et seq.*)

If the value of oxygen, when exhibited by the stomach, be fully established, then I have no doubt oxygenated bread, made with sufficient care and accuracy, is a desirable medium for its administration, and may be found a

desideratum in such cases as referred to by Dr. Birch, or where, for any reason, inhalation is objectionable or impossible.

6. Per-oxide of hydrogen, in solution, has been recommended for internal use, by Dr. Richardson and others. Dr. Goolden, of St. Thomas' Hospital, has used it, but finds it much less reliable and efficient than other preparations, as well as somewhat objectionable on account of it disagreeable flavor. It must be borne in mind that this compound is a very unstable one and liable to explosive decomposition.

Of other preparations, whose claims as oxygenating agents, have been urged, may be mentioned—*ozone water*, which is evidently but another name for an inferior article of oxygenated water, but for which special virtues have been claimed by a few practitioners. As brought to my knowledge, it is simply water through which oxygen gas, made by the ordinary chlorate of potash and manganese method, has been passed for purification. The water absorbs but about four or five per cent. by volume, of the gas, but contains also traces of chlorine, to which element the attractive, antiseptic and *anti-syphilitic* properties ascribed to it, may be largely due.

Ozonized oil has nothing but its disagreeableness to recommend it; hence it has acquired the name of "rancid oil."

The *permangauates*, *perchloric*, *nitric* and *hydrochloric acids* and the *chlorate of potash*, are all, undoubtedly, sources of free oxygen, when internally administered. Each of these is rich in oxygen and readily yields up one or more equivalents, under slight modification of conditions; hence the inquiry is entirely pertinent, as to how far *the tonic, antiseptic and other effects ascribed to these remedies, is due to the free oxygen evolved during their decomposition and solution in the system.*

In a majority of cases, I have used the remedy chiefly in gaseous form, administered almost exclusively by inhalation. In several, I have tentatively used oxygen gas; first,

pure and of full strength; second, diluted with common air; and third, admixed in various proportions with protoxide of nitrogen and common air.

In severe paroxysms of spasmodic asthma, which have continued until the system seriously suffers from non-aëration of the blood and general veinous congestion, in cases of asphyxia, fatal syncope, and other cases of suspended animation, and in some other emergencies—*e. g.*, threatened uræmic poisoning—the first form of administration may be selected as the best. For general use, and in ordinary cases, the last form mentioned is decidedly preferable. The second form may be substituted when the gas, in its full strength, is not required or admissible, and the protoxide is not available.

In the matter of proportions, and as respects the quantity to be used in various cases, there is as great range for selection and the exercise of professional judgment and discretion as in prescribing and compounding complex pharmaceutical preparations. Those physicians who think they "know all about the oxygen treatment,"—and they are not a few—having at some time administered, or, as is too often the case, having only *read* of the administration by inexperienced parties, of a few gallons, more or less, of what might be termed "varo gas," have blundered as stupidly and failed as utterly, as he would who should prescribe a few desultory doses of crude drugs, and then *pro*scribe the remedies if they failed to produce satisfactory constitutional effects. I may add, that I have often heard the use of oxygen abruptly condemned by physicians, but in no instance by one who has had the slightest practical knowledge of its effects.

The reply of an eminent English surgeon is suggestive. When asked his opinion of the treatment, he candidly admitted that, "having never administered it himself nor witnessed its administration in the hands of others, he could express no intelligent opinion concerning it."

That it requires some expenditure of care and time in its manipulation, and the exercise of much discretion in its

exhibition, and that some practitioners will fail in its use, through lack of these essentials, is very true; but that it adds so largely to our therapeutic resources—is, in fact, a desideratum in so many cases and contingencies, that no conscientious physician, who has once realized its thoroughly scientific claims, and witnessed its intelligent administration, will neglect to avail himself of its aid in all suitable cases.

I append brief clinical notes of a few selected cases in which I have met with marked success through the use of some form of super-oxygenation:

Case 1.—Mrs. J. S———, aged thirty-nine, by profession a singer and teacher of vocal music, gives the following history:

Several of her family have died of phthisis, and for several years past she has shown symptoms of its gradual invasion. Each winter she is troubled with severe bronchitis. It is now worse than ever before, and she has been obliged to forego the use of her voice. She is alarmed lest her present condition is premonitory of rapid and fatal decline. "It is just as the others started." I find her pale, anæmic, with rapid, weak pulse, cold extremities, severe cough and sub-clavicular pain, accompanied by a profuse muco-purulent expectoration. She is a confirmed dyspeptic, and as is usual in such cases, suffers greatly from functional derangement of the heart. Her appetite is poor and capricious, bowels constipated, and she is excessively fatigued on slight exertion. She is despondent, hysterical, and only consents to a trial of oxygen treatment at the earnest solicitation of her friends.

March 25, 1868, she presents herself for treatment. At a forced inspiration she can inhale 150 cubic inches of the gas, which I adapt to her peculiarly prostrate nervous condition by larger additions of protoxide of nitrogen.

April 1st.—The nervous depression of this patient is almost entirely relieved. She coughs no less—rather more, and expectorates more freely. She continues to take treatment once daily, and can now inhale 180 cubic inches at an inspiration.

April 10th.—Improvement in every respect is very marked. Her appetite and spirits have returned—she coughs less, and her expectoration has diminished, and lost its purulent character; extremities comfortable, *constipation relieved*, and she is enabled to resume her place in the choir, having no trouble to do even double duty with her voice.

April 20th.—The improvement continues. Her general health is better than for a long time. The bronchial trouble has disappeared, she has no cough, spirits never were better—has no thoughts of dying of "consumption;" sings, works and *eats* without fatigue or distress. Has gained in flesh, her cheeks bloom with healthy color, and she has increased her lung capacity to 220 cubic inches.

April 25th.—Patient considers herself *well*; appetite and digestion excellent, pulse full and strong, no more palpitation—she is as happy and hopefu as she previously was wretched and despondent.

Treatment suspended. (I have met this patient frequently since, and there has been no return of the untoward symptoms. Jan. 1869.)

Case 2.—May 23d. Mrs. C. L. W———, aged twenty-nine, married, applied for treatment. Has always had "weak lungs," and her friends fear the development of pulmonary disease. Her father died of cancer of the stomach, mother of cardiac disease (?) Has had a severe cough and circumscribed "sore spot," with a sense of constriction in her left lung, for a long time. Has been under the care of several eminent physicians, without benefit.

She is "nervous" and anæmic. The menstrual function has not been properly performed in three years; is often entirely wanting—at times the discharge is profuse, acrid and colorless; at others it is scanty, very offensive, and of a greenish or yellow color. She also suffers from frequent attacks of severe congestion of the kidneys, and has, almost constantly, a sense of weight and soreness in the region of these organs.

Placed her upon moderate doses of oxygen, well diluted with protoxide and common air.

The first dose affords a degree of immediate relief. She feels "rested," and the sense of "tightness" in her chest is lessened. Lung capacity 140 cubic inches.

June 1st.—Improvement has been constant and gratifying. Appetite and digestion have become perceptibly better. She coughs less, and the sense of soreness is scarcely perceptible; is buoyant and hopeful, and has a tinge of color in her cheeks. Inhales 165 cubic inches, and I order her to inhale moderate doses, twice daily, for a time.

June 15th.—The usual complication has apparently assumed a critical form—what were chronic becoming sub-acute conditions. She suffers considerably and is greatly alarmed. Active oxygen treatment suspended for the present, and measures of a soothing nature are addressed to the local malady—hot fomentations over the regions of the kidneys, and a hot hip-bath twice daily, with some other derivative measures, are prescribed, and moderate inhalations of dilute protoxide alone are administered.

June 20th.—The acute manifestations noted on the 15th soon subsided, and now the patient feels better than for years. Treatment resumed, with an increase in the proportion of free oxygen, and the quantity taken twice daily, somewhat diminished. She can now inhale 200 cubic inches at an inspiration.

June 25th.—Improvement since last record quite marked, and patient very sanguine of ultimate restoration to a fair degree of health.

July 1st.—Menstruation natural for the first time—painless, the discharge normal in quantity and of healthy color. Patient no longer "nervous"—has considerable color in her face, and walks from two to three miles daily without fatigue. Her voice, which had failed her in singing, is again strong,

the soreness and constriction entirely gone—coughs but little, eats heartily, digests well, sleeps better than she can remember to have done since childhood, and has gained considerably in flesh. She has developed her lung-capacity to 225 cubic inches, and her chest measurement accordingly. Her friends are greatly surprised at her improved appearance.

July 10th.—Patient continues to improve. Treatment moderated, and conjoined with a mild chalybeate course.

July 25th.—Treatment suspended, and patient returns to her friends, feeling that she has a stronger hold on life than she had dared to hope was attainable. With proper care and under favorable conditions, she is in a fair way to live many years, and enjoy a fair degree of health.

Case 3.—Miss A. B.———, aged nineteen, has been subject to severe paroxysms of asthma, quite frequent, for some years. A taint of the disease seems to be hereditary. The slightest changes of temperature and exposure bring on a paroxysm, which lasts from one to six days, and is often so violent as to alarm her friends. Even the inhalation of chloroform fails to control the spasm, when it is severe.

She has changed climate several times, by the advice of physicians, and has recently consulted and received a course of treatment at the hands of a noted throat-and-lung "specialist."

Nothing she has ever done having given her any permanent relief, she was brought by her father, Judge B———, to the office for advice, May 25th.

I found her delicately organized, highly sensitive, quite anæmic, as might be expected, and suffering from evident general venous congestion. There is a dark shade about her eyes, and she is excessively fatigued on slight exertion. I very confidently recommended a trial of the oxygen treatment, and she was placed upon daily inhalations of protoxide, containing but a trace of free oxygen. Lung capacity but 75 cubic inches.

June 4th.—She reports that the gas has "cured" her; she has had no oppression of her breathing since she began it. She has improved considerably in general appearance. Her complexion is as clear as could be wished. She inflates her lungs well and with perfect ease—inspiring 100 cubic inches at an effort.

June 20th.—No return of the paroxysms yet. Her general health has undergone great changes. Formerly she had very little appetite, and that of a morbid and capricious kind. Now she has excellent relish for substantial food, *and wants plenty of it.*

July 1st.—Improvement of the general health continues. Exposure from being caught in a storm, a few days after last record, induced a mild paroxysm of asthma, but it was readily controlled.

July 10th.—Patient feels buoyant and full of courage. Can now endure considerable exercise without excessive fatigue, and her mother reports that "she is really getting to be worth something." Treatment continued every other day. She now takes 140 cubic inches at an inspiration.

July 25th.—Treatment has been somewhat interrupted since last writing; but the general health of the patient continues excellent, and she breathes

as freely as as any non-asthmatic. She also exposes herself to changes of temperature with impunity. Does not "take cold" so easily as heretofore.

Aug. 10th.—There has been no return of the paroxysms, although the patient says she has repeatedly exposed herself to the same influences which invariably excited them, previous to treatment.

She is advised to continue the treatment at intervals, but as the patient removed from the city, no further observations are practicable.

(Nov. 30th.—This patient reports that she has continued to enjoy excellent health and has had but one paroxysm since treatment was suspended. She thinks if she could have continued the treatment for a longer period the cure would have have been perfect.)

Case 4.—Aug. 10th.—Miss E. L. C———, aged sixteen, was brought to to me for advice. Has been subject to epileptic convulsions for some years. The family history shows the malady to be hereditary. She is extremely "chlorotic"—tall and slender, with stooping, irregular gait and attitude, feeble pulse, soft, imperfectly developed muscles, sallow complexion, deeply shaded about the eyes, contracted chest, feeble and weak digestion. Has never menstruated. Cephalalgia is a constant symptom; sleep disturbed with horrid dreams, in which she starts, screams, gnashes her teeth, talks incoherently, and is frequently found in the morning hanging across the foot-board of the bed, "frothing at the mouth"—evidently having had a paroxysm during the night. I unhesitatingly advised a persevering trial of the oxygen treatment, and

Aug 13th., she was placed upon moderate doses of modified oxygen. Her lungs are extremely small, and imperfectly expanded and she can inhale but 60 cubic inches at one inspiration.

Aug. 20th.—She has perceptibly improved. Her sleep is much more quiet and natural, and there has been no return of the "fits." She can now take 90 cubic inches at an inspiration. Order her to take a liberal and nutritious diet, and place her upon mild chalybeates.

Aug. 30th.—Still no return of the paroxysms, appetite and digestion very much improved, and from being languid and listless, and constantly "tired," she has come to be quite ambitious, and endures considerable muscular exertion without fatigue. Her "headaches" have ceased to annoy her, she sleeps quietly, her complexion has become clear, there is a show of color in her cheeks, and she bas gained in flesh. Can inspire 100 cubic inches.

Sept. 14th.—In every respect this patient continues to improve. She attends school again, walking several miles daily, without fatigue.

Treatment continued every other day. Lung capacity 105 cubic inches.

Oct. 1st.—Is becoming quite robust in comparison with her former condition.

Oct. 10th.—From having exposed herself nearly all last night—the evening being quite chilly and damp—in attending a political demonstration, she is, to-day, quite indisposed, and for an hour or two, manifested symptoms of her former malady. The paroxysm, however, proved slight and readily yielded to ordinary remedies. She is again put upon daily oxygen treatment. Her lung capacity has increased to 115 cubic inches.

Oct. 20th.—No recurrence of untoward symptoms. Seems perfectly well in all respects. Treatment continued every other day.

Nov. 1st.—The patient has continued to gain in flesh and strength. Her appetite is fairly insatiable, and among her mates she is one of the most active. Would be taken at a glance for a more than ordinarily robust person of her age.

Treatment administered but twice a week. She inspires 120 cubic inches.

Nov. 10th.—Her menstrual function has manifested itself naturally, and without unusual disturbance. Her parents are rejoiced, since they have always coupled her convulsions with the absence of the catamenia.

Nov. 25th.—Treatment entirely suspended. Patient in perfect health. (Jan., 1869, this patient continues in perfect health, enjoying life actively and fully.)

Case 5.—Sept. 18th.—Mr. A. S———, merchant, aged fifty-one, applied to me. Has been an invalid for twenty years. Has confirmed dyspepsia, and excessive debility and irritability of the nervous system. Suffers much from constantly recurring paroxysms of a dull, benumbing pain, referred chiefly to the upper portion of the spinal column and base of the brain; and also has almost constant frontal headache. Constipation is habitual—with occasional attacks of diarrhœa; appetite poor and irregular, circulation feeble and unbalanced, extremities cold; almost impossible to keep his feet warm in winter. He is at times extremely irritable, as to mood, and at others is overcome by the most utter depression and despondency. He has suffered considerably from "ague," heretofore, and imagines he feels "dumb ague" now, at intervals. Has long been troubled with a derangement of the kidneys, his urine varying greatly from time to time, but always containing mucous and the phosphates in excess—as he has been informed by physicians who have examined it—his liver and spleen are both enlarged, and his cutaneous exudations have, at times, a very decided ammoniacal odor.

His urine—sample from that first voided in the morning, or urine sanguinis—has a specific gravity of 1030, contains excess of the alkaline phosphates, but there is a marked deficiency of urea and uric acid.

A course of thorough oxygen treatment is advised, with the prediction that several months will be required to effect marked and permanent benefit.

Sept. 20th.—Treatment begun, and the quantity of gas administered increased to double that usually prescribed, since all his vital functions seem oppressed and sluggish, and there is evident retention of urea in the system. Lung capacity 160 cubic inches.

Sept. 29th.—My confidence that oxygen would eliminate any excess of urea from his system, and my suspicions that most of his nervous symptoms arose from such retention, were well grounded. His urine to-day *is loaded with urea.* The nitric-acid test yields a mass of crystals of uric acid *equal to the bulk of both constituent liquids.* Other solids are present in but slight excess. Specific gravity 1035. (This example, like the former one, was from urine voided on first rising in the morning—the patient having taken the unusual quantity of eight gallons of the gas containing three gallons of pure oxygen, at nine o'clock the previous evening.) I could discover no traces of a saccharine or albuminous character.

All his nervous symptoms, which I had attributed to slight uræmic poisoning, have been materially relieved. He is less irritable, sleeps better and feels encouraged; but there is considerable disturbance of his general system. He complains of feeling some twinges of an ancient "rheumatism" revived. Treatment moderated by reducing the quantity of gas inhaled to one-half the former dose. He can take 200 cubic inches at an effort.

Oct. 11th.—The uncomfortable sensations and evidences of constitutional disturbance following the rapid treatment of the first week have disappeared. His appetite and digestion are improving. Sp. gr. of urine 1028, with still some excess of urea.

Oct. 18th.—Improvement has been gradual but constant, since last record. Cephalalgia is becoming a much less frequent symptom, and when present is less severe. Sp. gr. of urine 1025.

Nov. 11th.—Has steadily improved since last date, in spite of the drawback of constant overwork and perplexity in business matters. Sp. gr. of urine to day, 1022—no excess of urea. He inhales 220 cubic inches of gas at an inspiration.

Nov. 20th.—Urine contains no abnormal ingredients—no excess of urea, Sp. gr. 1018. Patient considers himself much more nearly "cured" than he had supposed was possible. His digestion is very good, he sleeps well,

and has lost nearly all his former irritability and inclination to despondency. His circulation is much more uniform—extremities in a comfortable glow most of the time, very little headache, and he does not become easily fatigued. Treatment suspended.

Jan. 5th.—Mr. S——— called and reports that he continues in every way improved.

PROCEEDINGS OF SOCIETIES.

Rush Medical College—Alumni Meeting.

The first annual meeting of the "Alumni Association of Rush Medical College" was held in the lower lecture room of the College on Feb. 3, 1869, "Commencement day," the President, Prof. E. Powell, in the chair.

Members present, Professor J. V. Z. Blaney, Jos. W. Freer, E. Ingals, M. Gunn and J. P. Ross. Drs. G. C. Paoli, G. J. Avery, N. T. Quales, C. T. Fenn, J. T. Weeks, T. D. Fitch, F. Henrotin, Jr., B. Durham, Theo. W. Stull, Geo. Egbert, D. V. Bachelle, F. A. Emmons, Ben. C. Miller, C. T. Parkes, D. L. Davidson, J. McClure, J. A. M. Gibbs, F. W. Coffin, H. Brownlee, E. S. Lathrop and the graduating class of 1868 and 1869.

The Constitution of the Association was read. The minutes of the meeting for the organization of the Association, Oct. 1, 1867, were read and approved.

On motion of Dr. C. T. Fenn, the Association proceeded to the election of officers for the ensuing year, with the following result:

For President, Dr. Alfred E. Ames, of Minneapolis, Minn.; for Vice President, Dr. G. C. Paoli, of Chicago; for second Vice President, Dr. B. F. Swafford, of Indiana; for Secretary, Dr. W. C. Hunt, of Chicago; for Treasurer, Dr. F. A. Emmons, of Chicago, and for Executive Committee, Drs. S. J. Avery, W. T. Quales and C. T. Parkes, of Chicago.

Dr. J. C. Paoli was then conducted to the chair, and in a

few pertinent remarks assumed its duties, when Prof. Blaney was introduced, and as President of the College on behalf of the Faculty, welcomed the Association to the halls of the College, congratulated them upon the auspicious event that, notwithstanding the inclemency of the weather, so many were assembled to do honor to their *Alma Mater*; alluded to the high character and standing of the graduates of Rush Medical College, not only during the late war of the rebellion, but throughout the Northwest and wheresoever dispersed, claiming for them a position in the profession the first among their equals, second to none in the world, and closed with an eloquent tribute to the memory of the late lamented President, Prof. Brainard, reminding the Association that to his genius and untiring efforts is mainly due the proud position the College and the her alumni now occupy, and that he felt assured that all who knew Brainard would keep for him a place in their memories as one who was entitled to and held a position among the first and most eminent surgeons of America, as the most original genius of his age in our country, and as the man who has contributed as much to the advance of surgery as any other member of the profession in America.

Prof. Powell, the retiring President, then delivered the first annual address, which was listened to with deep interest, and at its conclusion, Dr. Avery moved that the thanks of the Association be tendered to Prof. Powell for his very interesting and able address, which was heartily and unanimously carried.

On motion of Dr. C. T. Fenn, the Executive Committee was instructed to provide for an address or report for the next meeting other than the regular annual one of the President.

On motion, Prof. J. W. Freer and Dr. C. T. Fenn were added to the Committee to carry out the object of the last motion.

On motion of Prof. Ingals, the Secretary was instructed to request of the graduates of Rush Medical College wheresoever they may be (through the different medical journals)

to forward to him any history, or writing, or notice, either obituary or otherwise, of any of the alumni of this College, that may be of interest to the Association, to be read at any future meeting, or to be placed upon the records of the Association, also to request all graduates to forward to him their names and address, to be entered upon the register, or, if any should at any time be in the city, to call and enter their names themselves.

The Association was then invited to a reception to be held in the evening, after Commencement exercises, at the house of Dr. W. C. Hunt. The meeting then adjourned.

W. C. HUNT, Secretary.

American Medical Association.

RICHMOND, IND., Feb. 19, 1869.

EDITOR CHICAGO MEDICAL JOURNAL:

In Washington, in May last, after the American Medical Association had decided to hold its next session in New Orleans, I promised several gentlemen to ascertain whether an arrangement could be made with a first-class steamer to take all those who might wish to go via the Mississippi from Cairo to New Orleans, on special terms. My correspondence warrants me in saying that such an arrangement can be made, and that the particulars can be published on the 1st of April. Meanwhile, I thought it might be of interest to your readers to know that such an arrangement was on the tapis.

The time from Cairo to New Orleans will not exceed four days, and the fare will not exceed $35 from Cairo to New Orleans and return. This includes meals and state-rooms. Possibly better terms can be made, but as soon as the best are obtained I will advise you.

Prof. Gross and others thought that if all who desired to go to New Orleans via the river, could be accommodated on one well-appointed boat, it would make the voyage pleasant, and perhaps profitable. My idea is that some general remark upon the subject in the editorial pages of your March issue might interest your readers.

Very truly, etc.,

JAS. F. HIBBERD.

FOREIGN ITEMS.

Dr. Paul Niemeyer, of Magdebourg, proposes a new stethescope to which he applies the name acouoxylon. Referring to the manner in which the stethescope was discovered by Laennec, and to the fact that the scratch of a pin made upon one extremity of a beam may be distinguished by the ear applied to the other end of the same, he asserts that the distinguished inventor fell into a radical error in making use of a hollow cylinder of paper, and subsequently of wood, constituting a medium compounded of paper (or wood) and air, and hence possessing different capacities for conducting sound. Although, he continues, Laennec himself was astonished and satisfied at hearing the pulsations of the heart in a much more clear and distinct manner, his successors, on the contrary, have determined that with the ear applied immediately, the same end was accomplished, and that the perception of sounds by the stethescope was even less clear. Moreover, it is certain that Laennec with his cylinder heard many phenomena which have not been confirmed subsequently, and which probably were secondary sounds produced in the interior of the stethescope, which, from the time of Laennec has been of considerable length.

If now we bear in mind the physical law exactly determined by Chladni and Savart, that wood is a much more efficient conductor of sound than air, that in the relation of this capacity pine wood is eighteen times superior to air; in musical instruments, pine wood in *masses* is used whenever the conducting of sound only is desired. We ask, therefore, why there should be used in medicine a hollow cylinder which weakens, and even disturbs the perception of the phenomena which it is desirable to recognize as clearly as possible. The Doctor advises the construction of a stethescope by turning a solid cylinder from a single piece of very dry pine wood, which he terms acouoxylon, and which he asserts to be the only stethescope constructed in accordance with physical laws, and consequently superior in every respect to the stethescope of Laennec. *Probatum est!*

EDITORIAL.

The Last Number

Of THE JOURNAL inadvertently went to press and was past praying for before it was noticed that the Editorial Department was not represented save by Book Notices. The highly valuable original matter offered to our readers in its pages cannot have escaped the special notice of our readers.

The notice of Dr. Phillip's book is marred by the omission of an "h" from "Ophthalmia." For "Trumbull," read "Turnbull." The proof was read by a non-professional. For sale by Walker & Son, McVicker's Theatre Building.

Medical Legislation in Illinois.

At the present writing it would appear that the very absurd act for the protection (!) of the medical profession in this State, has received its quietus at the hands of the Legislature.

The very desirable statute for the regulation and promotion of the study of Anatomical Science, has passed the House, and has been ordered to a third reading in the Senate, which we suppose is about equivalent to its passage. The profession and the public are to be congratulated at the result.

Some one or more Sorrows-of-Werter Sentimentalists in the Senate, who should have been born in the Middle Ages, opposed the bill in their most forcibly-feeble manner, but the good sense of the body triumphed. *Laus Senatu!*

Svapnia and Sweet Quinine.

These preparations (see advertising pages of THE JOURNAL) from our own trials, and the reports of our friends, we fully believe are entitled to the merits claimed for them by the manufacturer.

BOOKS RECEIVED.

ON THE DYNAMICS, PRINCIPLES AND PHILOSOPHY OF ORGANIC LIFE: AN EFFORT TO OBTAIN DEFINITE CONCEPTIONS OF HOW DO MEDICINES PRODUCE THEIR EFFECTS? (Valedictory Address, delivered to the Muskingum County Medical Society, at its annual meeting held in the city of Zanesville, Onio, May 6, 1868.) By Z. C. McELROY, M. D., Pres., of Zanesville, Ohio.

The essay with the foregoing title appears to be an attempt to establish some rational basis for the so-called science of therapeutics; an attempt whose success the entire medical world would welcome most joyfully.

It is certainly true, as the writer asserts, that we are more in need of a "more philosophical classification" of the mass of empirical facts now in existence, than of any additions thereto. This need he assumes to have supplied in his theory, as set forth in the pamphlet before us, the essence of which appears to be a reduction of all organic processes into the two generic totals, "nutrition and oxydation," or constructive and destructive metamorphoses, and the operations of medicines to modifications of these two classes of phenomena, by which they become promoters or retarders of nutrition or constructive metamorphosis, or of oxydation or destructive metamorphosis, respectively, a most attractive theory should it be sustained by a wider generalization, and more accurate analysis.

We think the prefatory quotation with which our author introduces his subject somewhat unfortunate, viz: "Since it is given us to know our own existence, and be conscious of our own individuality, we may rest assured that we have what in reality is a far less wonderful power, the capacity of comprehending all the conditions of our life." This *non sequitur* may not, possibly, transcend the scope of Professor Draper's "profound faith" in the intellect of man, but we think it entirely surpasses the present reach of that intellect.

Much credit should certainly be awarded to the author for the industry and ingenuity which he has displayed in the collection and arrangement of his data. We must, however, be permitted to express the opinion that he has fallen into that most common of all errors, to which the student of natural sciences, especially, is exposed, hasty generalization. We are inclined to think, too, that he has, sometimes, been led by the aptness of his analogies to forget that analogies, however striking, are yet not identities, and hence while they are frequently admirable as identities, they are as frequently worthless as proofs. Let us take, for instance, his favorite example, the electro-magnetic telegraph, in which he detects such striking resemblance in structure and function, normally, to the nervous system, that he arrives at the conclusion that the laws which govern, and the principles which underlie both are identical. This is certainly a step, and a long step in advance of the times, but it seems not unreasonable to follow the course pursued in determining organic analogies in comparative science, and apply pathological as well as physiological tests, and here we think the analogy ceases. The nervous system, when deranged functionally or structurally, manifests many and varied phenomena to which the electro-magnetic telegraph furnishes no analogies whatever, but in order to determine identities no variations are admissable under any aspect.

In the brief space which can be spared in the columns of THE JOURNAL it is impossible to do more than to indicate the general character and scope of a work of this sort. We must leave to the individual reader the task of a more thorough analysis, with the assurance that, while we cannot admit many of the author's premises, and hence cannot justify the conclusions

therefrom, and think, moreover, that in general the data are too restricted to sustain his inferences, there is much in the work to commend it to the thoughtful student, and we think it not at all improbable that the author has established an hypothesis which may ultimately constitute the basis for a true science of therapeutics, a consummation for the accomplishment of which he has our most hearty good wishes. W. H.

A HAND-BOOK OF UTERINE THERAPEUTICS AND OF DISEASES OF WOMEN. By Edward John Tilt, M. D., Member of the Royal College of Physicians, etc., etc. Second American edition thoroughly revised and amended. New York: *D. Appleton & Co.*, 90, 92 and 94 Grand Street, 1869. Pp. 345. Chicago: *W. B. Keen & Cook.*

This edition of a well-known and exceedingly useful book has been prepared by the author expressly for the American publishers. It would be a work of supererogation to say that this is now a standard treatise on the subject.

THE HEALTH-LIFT: Its Theory and Practice.

A beautifully-printed monograph of 38 pages, expounding the advantages of this particular mode of exercise, with a sketch of the principles upon which it is based. For sale at the city bookstores.

BRAITHWAITE'S RETROSPECT OF PRACTICAL MEDICINE AND SURGERY. Part LVIII—January. Uniform American edition. New York: *W. A. Townsend & Adams.* Chicago: *The Western News Company.* Paper. Pp. 304.

ARCHIVES OF OPHTHALMOLOGY AND OTOLOGY. Edited and published simultaneously in English and German. Prof. H. Knapp, M. D., in New York, and Prof. S. Moos, M. D., in Heidelberg. New York: *William Wood & Co.*

Prospectus.—The work is to be issued half-yearly, in parts of about three hundred octavo pages each, fully illustrated by fine engravings and superb chromo-lithographic plates. Subscription Price $7.00 *per annum* in advance.

Items.

Difficult and Tedious Labor—With inertia of the uterus and rigidity of the *os*, especially in primiparous cases over thirty years of age, is treated by our friend J. W. Dora, M. D., of Mattoon, as follows:

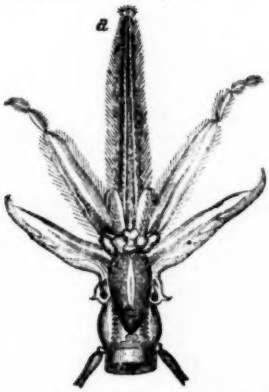
"After having administered either chloroform by inhalation or having applied ung: belladonnæ to the *os* for the purpose of promoting dilitation of the same, I give, viz:

Fld ext. of Ergott	℥ j.
Chloroform	℥ ss.
Syr. of Acacia	" "

M. Sig. Teaspoonful every 20 or 30 minutes until the labor is well established, which I have never known to fail after the third dose, and repeat at such intervals as may be indicated afterwards. It has never disappointed me, and I never knew any unpleasant results from its use, either to the mother or child. J. W. Dora."

The Craig Microscope.—This little instrument, afforded at the trivial price of $2.75 (See our advertising sheet), is really a very clever affair. It magnifies, we should judge, from 80 to 100 diameters, and is easily adjusted. In the absence of more expensive instruments it can be employed very satis-

factorily in the study of the minute anatomy of tissues, and in the examination of the epithelium in cutaneous diseases, the blood, pus, mucous, urine, etc. A couple of cuts are subjoined which illustrate the instrument and its mode of use, and, also, its exhibition of a bee's tongue.



THE Summer Course of Examinations and Lectures in connection with the Summer Lectures at the Jefferson Medical College, will begin on Tuesday, April 13, 1869, at 8.45 o'clock, A. M., at the Philadeldhia School of Anatomy, Chant street, (Tenth street above Chestnut.)

The examinations will be held daily, excepting Wednesday and Saturday, and will have direct bearing on the lectures and clinics. Lectures will also be delivered by Dr. Hutchins on Diseases of Women, with clinical facilities to the class, and by Dr. Allis on Physiology. The examinations and lectures will be illustrated by diagrams, models, cabinet of materia medica, etc. Office students will be taken by either members of the Association.

Dr. Keen, Anatomy and Chemistry; Dr. Hutchins, Obstetrics, Practice and Materia Medica; Dr. Allis, Surgery and Physiology.

Fee for the Examinations, $20. Fee for Office Students, (one year, including Winter and Summer Examinations,) $100. For further information apply at the Rooms, or to

W. W. KEEN, M. D., 1619 Chestnut Street.
E. R. HUTCHINS, M. D., 269 So. 5th Street.
O. H. ALLIS, M. D., 221 So. 9th Street.

LITHOGRAPH.—Mr. CHAS. KEIL, Janitor of Rush Medical College, has had engraved, from photographs, a sheet containing the portraits of the present Faculty of the College. In the main the likenesscs are very good. Copies will be mailed postpaid to those desiring them, by enclosing $2.00 and addressing,

CHARLES KEIL,
Rush Medical College, Chicago.

Special Notice to Subscribers.

Upon the books of THE JOURNAL appear the names of a large number of subscribers who are in arrears for subscriptions. We have had an immensity of trouble in correspondence about this thing, and wish to have everything cleared up at once. To any subscriber who is in arrears we propose this: Pay at once what you think you owe, and so state, and we will balance your account on our books. We are tired and disgusted at looking over the old ledger, and have ordered a new one which we mean shall be a *clean* record.

Annual Announcement of the Spring Term for 1869.

The Session will commence WEDNESDAY, March 3d, 1869, and continue to the 1st of July.

The Faculty will be assisted by the following gentlemen:

W. R. MARSH, M. D., Instructor in the Principles and Practice of Medicine.

J. H. ETHERIDGE, M. D., Instructor in Materia Medica.

C. T. PARKES, M.D., Instructor in Anatomy.

HENRY M. LYMAN, M. D., Instructor in Physiology.

CURTIS T. FENN, M. D., Instructor in Obstetrics.

J. N. DANFORTH, M. D., Instructor in Toxicology and Medical Jurisprudence.

H. F. CHESBROUGH, M. D., Demonstrator of Anatomy.

W. C. HUNT, M. D., Instructor in Microscopical Anatomy and use of Microscope

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The Course will consist of daily lectures and recitations at the College, and Clinical observations in the Hospitals, Infirmaries, and Dispensaries of the City.

PROF. BLANEY will give instruction in Practical Chemistry, affording access for that purpose to the large and well-appointed Laboratory of the College.

PROF. POWELL will teach Surgery.

PROF. GUNN will conduct his Surgical Clinique at the College.

PROF. ROSS will conduct the Medical Clinique and instruct in Physical Diagnosis and Diseases of the Chest.

The County Hospital will afford two Medical and Surgical Cliniques each week.

The Marine Hospital will be open to students of the Course.

The Charitable Eye and Ear Infirmary is located near the College and will be open every day of the week for Clinical teaching, by PROF. HOLMES, Lecturer on Diseases of the Eye and Ear.

The College Dispensary will be open every day, affording to students an excellent opportunity for perfecting themselves in the art of diagnosis.

The Dissecting Room will be kept open during the entire session, and will be abundantly supplied with material for the study of Practical Anatomy.

Special instruction in Practical Chemistry will be given by Prof. Blaney, to such as desire.

Graduates of the College will be admitted to the Spring Session on the matriculation ticket. All others will be required to procure tickets.

Fees for the Spring Term—exclusive of Hospital and Demonstrator's Tickets—$20.

Certificates of attendance upon the Full Course will be considered the equivalent of time passed under the instruction of a medical practitioner during the Spring and Summer months of the year.

Every student of medicine is urged to consider the advantages to him of remaining in the city during the spring and summer, when the best opportunities are afforded for successful study. The hospitals and dispensaries are then overrunning with material illustrative of disease, and the student may have these facilities at a comparatively trivial expense.

He needs access to libraries and reading rooms; and, above all, he needs to become familiar with earnest men in the profession, that his character may be stamped by the example of their industry and habits of attention. He needs a text-book, daily and hourly illustrated in the street, the class-room, the laboratory, the hospital ward, and the dead-house, and the active rivalry of associates—a sure road to excellence.

The design of the Course is that it may supply the want of a numerous body of students who must pass the time more or less unprofitably while removed from the best appliances during a long vacation. The majority of medical students in the Northwest do not need to be reminded of the value of time and money. A year given to close observation under the tutelage of the College will insure practical ability with prospect of immediate reward. The College offers to become Preceptor as well as *Alma Mater*, that the highest lustre may be given its *Almuni*.

For the Annual Catalogue of the College, and for additional information concerning the Spring Session,

Address,

Dr. E. POWELL, *Treas., 45 S. Clark St.*

Students arriving in the City are requested to call at once upon the Janitor, Mr. CHARLES KEIL, at the College Building, corner of North Dearborn and Indiana streets, Chicago.

The Twenty-seventh Annual Session of the regular Course of Lectures will commence on Wednesday, September 29th, 1869, and continue eighteen weeks.